NAME:AJISE TENIOLA PRECIOUS

19/MHS01/069

MBBS

MHS

1. EICHLER’S GROUPING OF 1884

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| DIVISION | CLASS |
| Thallophyta | Phycotinae (algae)Mycotinae (fungi)  |
| Bryophyta | Hepaticae (liverworts)Musci (mosses) |
| Pteridophyta | Psilotinate (psilotum)Lycopodinae (lycopodium,selaginella)Equisetinae (horsetails)Filicinae (ferns) |
| Spermatophyta | Gymnospermae (gymnosperms)Angiospermae (angiosperms) |

2.IMPORTANCE OF ALGAE TO MAN

* It serves as food for people
* It contains high iodine content which prevents goitre
* It serves as thickening agent in shampoo and ice cream
* The red algae provide agar and carrageen used for the preparation of various gels used in scientific research.
* Brown algae yield alginic acid which is used to stabilize emulsions and suspension found in product such as syrup ,ice cream, paint.

3.UNICELLULAR FORM OF ALGAE

 Chlamydomonas represents the unicellular and motile forms of green algae, which is found in stagnant water, flagella are the structure of mobility, the cell is bounded by a cellulose cell wall;contain cellulose, the nucleus carries the genetic programme of the cell, the stigma is for photoreception, the mitochondria mediate the elaboration of energy molecules, manufactured sugar is processed into starch on the pyrenoid.

4.REPRODUCTION OF UNICELLULAR ALGAE

 Reproduction can either be vegetative or sexual

Vegetative reproduction

In chlamydomonas a cell about to divide losses its flagella. The cell undergoes mitotic division which is a kind of cell division which maintains the quantity and quality of genetic material. When it undergoes mitotic division it leads to two nuclei, cell walls are elaborated which delimit cytoplasm around each nucleus i.e two daughter cells(zoospores) are released. Increase in the population of cells in a colony is achieved by repeated mitotic division.

Sexual reproduction

 In chlamydomonas, aggregation of cells (clumping) in a colony occurs under favorable conditions. These cells pair by their posterior(flagellated)ends. This pairing is said to be isogamous because the pairing cells(gametes) are morphologically identical. The cytoplasm of the pairing cells fuse (plasmogamy) and the flagella are lost. The two nuclei fuse(karyogamy) this situation is essentially a fertilization process so that a zygote is formed. They undergo mitosis division.

5.DIFFERENCE BETWEEN THE TWO TYPES FORMS OF ALGAE

|  |  |
| --- | --- |
| PANDORINA | VOLVOX |
| Unicellular motile thallus | Multicellular motile thallus |
|  |  |
| Sexual reproduction is anisogamous | Sexual reproduction is oogamous |

6.COMPLEX FORMS IN THE ALGAE

Fucus

It’s a genus of the brown algae whose species are found on rocks in the intertidal zones of the sea shores. The body of the plant is flattened, dichotomously-branched thallus with a mid rib,a vegetative apex and a multicellular disk with which plant is attached to rock surface. The body has air bladders which is believed to aid the plant to float on the water. It varies in size from a few centrimetres to about two metres in length. Sexual reproduction is oogamous, sex cells are produced in conceptacles which have openings(ostioles)on the surface of the thallus.